

Peter Löwenberg-Neto
UNILA/Instituto de Ciências da Vida e da Natureza, Brazil
peter.lowenberg@unila.edu.br

November 24, 2017

Dr. A. Townsend Peterson
Editor in Chief
Biodiversity Informatics

Dear Dr. Townsend Peterson,

I am pleased to submit an original research paper entitled “A metric to quantify analogous conditions and rank environmental layers” for consideration for publication in the *Biodiversity Informatics*.

Environmental layers are common GIS objects used to represent continuous variables. In biogeography and ecology it is very important to know if a layer is nearly constant or it has no repeating values. In this paper, I explored the dual-space correspondence, which is a framework based on Hutchinson’s duality, to present a metric that quantifies intermediate degrees of analogous conditions (layer-scoped), and then I used the metric to rank layers. I analyzed a very popular dataset (Worldclim/Bioclim layers) for two geographical extents and two resolutions.

I believe that this manuscript is appropriate for publication by the *Biodiversity Informatics* because it presents a quantification of an unprecedented feature of environmental layers, degree of analog conditions. This approach may be interesting for a wide audience, especially those who are in concern of selecting and interpreting environmental variables in species distribution modeling (SDM) and niche-based analyzes.

This manuscript has not been published and is not under consideration for publication elsewhere. I have no conflicts of interest to disclose.

Thank you for your attention.

Sincerely,

Peter Löwenberg